

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-118430-1

Client Project/Site: Gold King Mine - Region 8

For:

Weston Solutions, Inc.

1435 Garrison Street

Suite 100

Lakewood, Colorado 80215

Attn: Moira Pryhoda



Authorized for release by:

11/2/2015 5:30:13 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

## Method Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL SAV
200.8	Metals (ICP/MS)	EPA	TAL SAV
2340B-2011	Total Hardness (as CaCO <sub>3</sub> ) by calculation	SM	TAL SAV
245.1	Mercury (CVAA)	EPA	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
4500 H+ B-2011	pH	SM	TAL SAV

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

## Sample Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-118430-1	A72_102915_0715	Water	10/29/15 07:15	10/30/15 09:45
680-118430-2	GKM_GSTI_102915_0855	Water	10/29/15 08:55	10/30/15 09:45
680-118430-3	GKM_GSTO_102915_1000	Water	10/29/15 10:00	10/30/15 09:45
680-118430-4	GKM_GSTI_102915_0855D	Water	10/29/15 08:55	10/30/15 09:45

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TestAmerica Savannah

# Definitions/Glossary

Client: Weston Solutions, Inc.  
Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: Weston Solutions, Inc.  
Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Job ID: 680-118430-1**

**Laboratory: TestAmerica Savannah**

Narrative

## CASE NARRATIVE

**Client: Weston Solutions, Inc.**

**Project: Gold King Mine - Region 8**

**Report Number: 680-118430-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

### RECEIPT

The samples were received on 10/30/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.4 C.

### DISSOLVED METALS (ICP)

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for dissolved metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/30/2015 and analyzed on 11/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### TOTAL METALS (ICP)

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for total metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/30/2015 and analyzed on 11/02/2015.

Potassium and Potassium, Dissolved failed the recovery criteria high for LCS 680-408299/2-A. These analytes were biased high in the LCS. Samples were flagged and reported.

Potassium, Potassium, Dissolved, Calcium and Calcium, Dissolved failed the recovery criteria high for the MS of sample GKM\_GSTI\_102915\_0855DMS (680-118430-4) in batch 680-408579.

Iron, Iron, Dissolved, Calcium and Calcium, Dissolved failed the recovery criteria low for the MSD of sample GKM\_GSTI\_102915\_0855DMSD (680-118430-4) in batch 680-408579. Potassium and Potassium, Dissolved failed the recovery criteria high.

Refer to the QC report for details.

Samples GKM\_GSTI\_102915\_0855 (680-118430-2)[10X] and GKM\_GSTI\_102915\_0855D (680-118430-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### DISSOLVED METALS (ICPMS)

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/30/2015 and analyzed on 11/01/2015 and 11/02/2015.

## Case Narrative

Client: Weston Solutions, Inc.  
Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

### Job ID: 680-118430-1 (Continued)

#### Laboratory: TestAmerica Savannah (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL METALS (ICPMS)**

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for total metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/30/2015 and analyzed on 11/01/2015 and 11/02/2015.

Barium and Barium, Dissolved were detected in method blank MB 680-408296/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Several analytes failed the recovery criteria low for the MS of sample GKM\_GSTI\_102915\_0855DMS (680-118430-4) in batch 680-408561.

Several analytes failed the recovery criteria low for the MSD of sample GKM\_GSTI\_102915\_0855DMSD (680-118430-4) in batch 680-408561.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

One or more of the following analytes recovered above the linear range of the calibration: manganese and zinc. The data has been qualified as an estimated value and reported.

GKM\_GSTO\_102915\_1000 (680-118430-3)

Refer to the QC report for details.

Samples GKM\_GSTI\_102915\_0855 (680-118430-2)[100X] and GKM\_GSTI\_102915\_0855D (680-118430-4)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **DISSOLVED MERCURY (CVAA)**

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 10/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL MERCURY**

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 10/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **ALKALINITY**

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/31/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **ANIONS BY ION CHROMATOGRAPHY (28 DAY)**

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with EPA

# Case Narrative

Client: Weston Solutions, Inc.  
Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Job ID: 680-118430-1 (Continued)

### Laboratory: TestAmerica Savannah (Continued)

Method 300.0. The samples were analyzed on 10/30/2015.

Samples A72\_102915\_0715 (680-118430-1)[10X], GKM\_GSTI\_102915\_0855 (680-118430-2)[2X], GKM\_GSTI\_102915\_0855 (680-118430-2)[50X], GKM\_GSTO\_102915\_1000 (680-118430-3)[2X], GKM\_GSTO\_102915\_1000 (680-118430-3)[50X], GKM\_GSTI\_102915\_0855D (680-118430-4)[2X] and GKM\_GSTI\_102915\_0855D (680-118430-4)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### ANIONS BY ION CHROMATOGRAPHY (48 HOUR)

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for Anions by Ion Chromatography (48 Hour) in accordance with EPA Method 300.0. The samples were analyzed on 10/30/2015.

Samples GKM\_GSTI\_102915\_0855 (680-118430-2)[2X], GKM\_GSTO\_102915\_1000 (680-118430-3)[2X] and GKM\_GSTI\_102915\_0855D (680-118430-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### TOTAL HARDNESS (AS CaCO<sub>3</sub>) BY CALCULATION

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for total hardness (as CaCO<sub>3</sub>) by calculation in accordance with SM 2340B. The samples were analyzed on 11/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### CORROSIVITY (PH)

Samples A72\_102915\_0715 (680-118430-1), GKM\_GSTI\_102915\_0855 (680-118430-2), GKM\_GSTO\_102915\_1000 (680-118430-3) and GKM\_GSTI\_102915\_0855D (680-118430-4) were analyzed for corrosivity (pH) in accordance with SM 4500 H+ B. The samples were analyzed on 10/31/2015.

This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. This sample(s) was performed in the laboratory outside the 15 minute timeframe.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: A72\_102915\_0715**

**Lab Sample ID: 680-118430-1**

**Matrix: Water**

Date Collected: 10/29/15 07:15

Date Received: 10/30/15 09:45

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.1		0.50	0.20	mg/L			10/30/15 13:36	1
Nitrate as N	0.091		0.050	0.023	mg/L			10/30/15 13:46	1
Fluoride	0.64		0.10	0.040	mg/L			10/30/15 13:36	1
Sulfate	210		10	4.0	mg/L			10/30/15 15:17	10

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2000		200	24	ug/L			11/02/15 12:00	1
Calcium	81000		500	25	ug/L			11/02/15 12:00	1
Iron	3400		50	17	ug/L			11/02/15 12:00	1
Magnesium	5400		500	33	ug/L			11/02/15 12:00	1
Potassium	1000 *		1000	17	ug/L			11/02/15 12:00	1
Sodium	3200		1000	480	ug/L			11/02/15 12:00	1

## Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	24	U	200	24	ug/L			11/02/15 12:32	1
Calcium, Dissolved	81000		500	25	ug/L			11/02/15 12:32	1
Iron, Dissolved	1500		50	17	ug/L			11/02/15 12:32	1
Magnesium, Dissolved	5400		500	33	ug/L			11/02/15 12:32	1
Potassium, Dissolved	1100 *		1000	17	ug/L			11/02/15 12:32	1
Sodium, Dissolved	3400		1000	480	ug/L			11/02/15 12:32	1

## Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40	U	1.0	0.40	ug/L			11/01/15 15:37	1
Arsenic	1.1		1.0	0.37	ug/L			11/01/15 15:37	1
Barium	24	B	2.0	0.14	ug/L			11/01/15 15:37	1
Beryllium	0.29	J	0.40	0.15	ug/L			11/01/15 15:37	1
Cadmium	1.7		0.50	0.043	ug/L			11/01/15 15:37	1
Chromium	1.0	U	2.0	1.0	ug/L			11/01/15 15:37	1
Cobalt	6.4		0.40	0.12	ug/L			11/01/15 15:37	1
Copper	27		1.0	0.50	ug/L			11/01/15 15:37	1
Lead	4.2		0.30	0.060	ug/L			11/01/15 15:37	1
Manganese	1300		2.5	1.2	ug/L			11/01/15 15:37	1
Molybdenum	1.0		1.0	0.45	ug/L			11/01/15 15:37	1
Nickel	4.7		1.0	0.40	ug/L			11/01/15 15:37	1
Selenium	0.58	U	2.0	0.58	ug/L			11/01/15 15:37	1
Silver	0.10	U	1.0	0.10	ug/L			11/01/15 15:37	1
Thallium	0.10	U	0.20	0.10	ug/L			11/01/15 15:37	1
Vanadium	0.48	J	1.0	0.30	ug/L			11/01/15 15:37	1
Zinc	580		20	2.8	ug/L			11/01/15 15:37	1

## Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	0.40	U	1.0	0.40	ug/L			11/01/15 15:56	1
Arsenic, Dissolved	0.37	U	1.0	0.37	ug/L			11/01/15 15:56	1
Barium, Dissolved	25	B	2.0	0.14	ug/L			11/01/15 15:56	1
Beryllium, Dissolved	0.15	U	0.40	0.15	ug/L			11/01/15 15:56	1
Cadmium, Dissolved	1.8		0.50	0.043	ug/L			11/01/15 15:56	1

TestAmerica Savannah

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: A72\_102915\_0715**

**Lab Sample ID: 680-118430-1**

**Matrix: Water**

Date Collected: 10/29/15 07:15

Date Received: 10/30/15 09:45

## Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Dissolved	1.0	U	2.0	1.0	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Cobalt, Dissolved</b>	<b>6.5</b>		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Copper, Dissolved</b>	<b>2.9</b>		1.0	0.50	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Lead, Dissolved</b>	<b>0.19 J</b>		0.30	0.060	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Manganese, Dissolved</b>	<b>1300</b>		2.5	1.2	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Molybdenum, Dissolved</b>	<b>0.78 J</b>		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Nickel, Dissolved</b>	<b>4.8</b>		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:56	1
Selenium, Dissolved	0.58	U	2.0	0.58	ug/L		10/30/15 12:47	11/01/15 15:56	1
Silver, Dissolved	0.10	U	1.0	0.10	ug/L		10/30/15 12:47	11/01/15 15:56	1
Thallium, Dissolved	0.10	U	0.20	0.10	ug/L		10/30/15 12:47	11/01/15 15:56	1
Vanadium, Dissolved	0.30	U	1.0	0.30	ug/L		10/30/15 12:47	11/01/15 15:56	1
<b>Zinc, Dissolved</b>	<b>560</b>		20	2.8	ug/L		10/30/15 12:47	11/01/15 15:56	1

## Method: 2340B-2011 - Total Hardness (as CaCO<sub>3</sub>) by calculation

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Hardness</b>	<b>220</b>			3.3	mg/L			11/02/15 14:20	1

## Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 16:34	1

## Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 17:42	1

## General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.10	HF			SU			10/31/15 11:23	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	8.9		5.0	5.0	mg/L			10/31/15 11:23	1

**Client Sample ID: GKM\_GSTI\_102915\_0855**

**Lab Sample ID: 680-118430-2**

**Matrix: Water**

Date Collected: 10/29/15 08:55

Date Received: 10/30/15 09:45

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>0.50 J</b>		1.0	0.40	mg/L			10/30/15 13:50	2
Nitrate as N	0.046	U	0.10	0.046	mg/L			10/30/15 14:47	2
<b>Fluoride</b>	<b>10</b>		0.20	0.080	mg/L			10/30/15 13:50	2
<b>Sulfate</b>	<b>1500</b>		50	20	mg/L			10/30/15 16:15	50

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>21000</b>		200	24	ug/L		10/30/15 12:47	11/02/15 12:20	1
<b>Calcium</b>	<b>380000</b>		5000	250	ug/L		10/30/15 12:47	11/02/15 12:24	10
<b>Iron</b>	<b>85000</b>		50	17	ug/L		10/30/15 12:47	11/02/15 12:20	1
<b>Magnesium</b>	<b>23000</b>		5000	330	ug/L		10/30/15 12:47	11/02/15 12:24	10
<b>Potassium</b>	<b>2500 *</b>		1000	17	ug/L		10/30/15 12:47	11/02/15 12:20	1
<b>Sodium</b>	<b>1700</b>		1000	480	ug/L		10/30/15 12:47	11/02/15 12:20	1

TestAmerica Savannah

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855**

**Lab Sample ID: 680-118430-2**

**Matrix: Water**

Date Collected: 10/29/15 08:55

Date Received: 10/30/15 09:45

## Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	20000		200	24	ug/L		10/30/15 12:47	11/02/15 12:35	1
Calcium, Dissolved	370000		5000	250	ug/L		10/30/15 12:47	11/02/15 12:39	10
Iron, Dissolved	77000		50	17	ug/L		10/30/15 12:47	11/02/15 12:35	1
Magnesium, Dissolved	22000		5000	330	ug/L		10/30/15 12:47	11/02/15 12:39	10
Potassium, Dissolved	2500 *		1000	17	ug/L		10/30/15 12:47	11/02/15 12:35	1
Sodium, Dissolved	1800		1000	480	ug/L		10/30/15 12:47	11/02/15 12:35	1

## Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.4		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:41	1
Arsenic	30		1.0	0.37	ug/L		10/30/15 12:47	11/01/15 15:41	1
Barium	9.8 B		2.0	0.14	ug/L		10/30/15 12:47	11/01/15 15:41	1
Beryllium	9.8		0.40	0.15	ug/L		10/30/15 12:47	11/01/15 15:41	1
Cadmium	57		0.50	0.043	ug/L		10/30/15 12:47	11/01/15 15:41	1
Chromium	2.8		2.0	1.0	ug/L		10/30/15 12:47	11/01/15 15:41	1
Cobalt	86		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 15:41	1
Copper	4800		100	50	ug/L		10/30/15 12:47	11/02/15 09:12	100
Lead	30		0.30	0.060	ug/L		10/30/15 12:47	11/01/15 15:41	1
Manganese	29000		250	120	ug/L		10/30/15 12:47	11/02/15 09:12	100
Molybdenum	3.9		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 15:41	1
Nickel	49		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:41	1
Selenium	1.8 J		2.0	0.58	ug/L		10/30/15 12:47	11/01/15 15:41	1
Silver	0.10 U		1.0	0.10	ug/L		10/30/15 12:47	11/01/15 15:41	1
Thallium	0.25		0.20	0.10	ug/L		10/30/15 12:47	11/01/15 15:41	1
Vanadium	21		1.0	0.30	ug/L		10/30/15 12:47	11/01/15 15:41	1
Zinc	20000		2000	280	ug/L		10/30/15 12:47	11/02/15 09:12	100

## Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	1.9		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 16:00	1
Arsenic, Dissolved	23		1.0	0.37	ug/L		10/30/15 12:47	11/01/15 16:00	1
Barium, Dissolved	9.8 B		2.0	0.14	ug/L		10/30/15 12:47	11/01/15 16:00	1
Beryllium, Dissolved	9.3		0.40	0.15	ug/L		10/30/15 12:47	11/01/15 16:00	1
Cadmium, Dissolved	56		0.50	0.043	ug/L		10/30/15 12:47	11/01/15 16:00	1
Chromium, Dissolved	2.2		2.0	1.0	ug/L		10/30/15 12:47	11/01/15 16:00	1
Cobalt, Dissolved	81		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 16:00	1
Copper, Dissolved	4800		100	50	ug/L		10/30/15 12:47	11/02/15 09:16	100
Lead, Dissolved	27		0.30	0.060	ug/L		10/30/15 12:47	11/01/15 16:00	1
Manganese, Dissolved	29000		250	120	ug/L		10/30/15 12:47	11/02/15 09:16	100
Molybdenum, Dissolved	3.1		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 16:00	1
Nickel, Dissolved	48		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 16:00	1
Selenium, Dissolved	1.2 J		2.0	0.58	ug/L		10/30/15 12:47	11/01/15 16:00	1
Silver, Dissolved	0.10 U		1.0	0.10	ug/L		10/30/15 12:47	11/01/15 16:00	1
Thallium, Dissolved	0.24		0.20	0.10	ug/L		10/30/15 12:47	11/01/15 16:00	1
Vanadium, Dissolved	16		1.0	0.30	ug/L		10/30/15 12:47	11/01/15 16:00	1
Zinc, Dissolved	20000		2000	280	ug/L		10/30/15 12:47	11/02/15 09:16	100

## Method: 2340B-2011 - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	1000		3.3	3.3	mg/L			11/02/15 14:20	1

TestAmerica Savannah

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855**

**Lab Sample ID: 680-118430-2**

Matrix: Water

Date Collected: 10/29/15 08:55

Date Received: 10/30/15 09:45

## Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 16:44	1

## Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 17:51	1

## General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.55	HF			SU			10/31/15 11:27	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	mg/L			10/31/15 11:27	1

**Client Sample ID: GKM\_GSTO\_102915\_1000**

**Lab Sample ID: 680-118430-3**

Matrix: Water

Date Collected: 10/29/15 10:00

Date Received: 10/30/15 09:45

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.52	J	1.0	0.40	mg/L			10/30/15 14:05	2
Nitrate as N	0.046	U	0.10	0.046	mg/L			10/30/15 15:03	2
Fluoride	6.7		0.20	0.080	mg/L			10/30/15 14:05	2
Sulfate	1200		50	20	mg/L			10/30/15 16:30	50

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6500		200	24	ug/L		10/30/15 12:47	11/02/15 12:28	1
Calcium	550000		500	25	ug/L		10/30/15 12:47	11/02/15 12:28	1
Iron	18000		50	17	ug/L		10/30/15 12:47	11/02/15 12:28	1
Magnesium	5500		500	33	ug/L		10/30/15 12:47	11/02/15 12:28	1
Potassium	2600	*	1000	17	ug/L		10/30/15 12:47	11/02/15 12:28	1
Sodium	5100		1000	480	ug/L		10/30/15 12:47	11/02/15 12:28	1

## Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	1500		200	24	ug/L		10/30/15 12:47	11/02/15 12:43	1
Calcium, Dissolved	530000		500	25	ug/L		10/30/15 12:47	11/02/15 12:43	1
Iron, Dissolved	33	J	50	17	ug/L		10/30/15 12:47	11/02/15 12:43	1
Magnesium, Dissolved	230	J	500	33	ug/L		10/30/15 12:47	11/02/15 12:43	1
Potassium, Dissolved	2700	*	1000	17	ug/L		10/30/15 12:47	11/02/15 12:43	1
Sodium, Dissolved	6200		1000	480	ug/L		10/30/15 12:47	11/02/15 12:43	1

## Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40	U	1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:52	1
Arsenic	4.2		1.0	0.37	ug/L		10/30/15 12:47	11/01/15 15:52	1
Barium	9.7	B	2.0	0.14	ug/L		10/30/15 12:47	11/01/15 15:52	1
Beryllium	2.4		0.40	0.15	ug/L		10/30/15 12:47	11/01/15 15:52	1
Cadmium	15		0.50	0.043	ug/L		10/30/15 12:47	11/01/15 15:52	1
Chromium	1.2	J	2.0	1.0	ug/L		10/30/15 12:47	11/01/15 15:52	1
Cobalt	23		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 15:52	1
Copper	1200		1.0	0.50	ug/L		10/30/15 12:47	11/01/15 15:52	1

TestAmerica Savannah

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTO\_102915\_1000**

**Lab Sample ID: 680-118430-3**

**Matrix: Water**

Date Collected: 10/29/15 10:00

Date Received: 10/30/15 09:45

## Method: 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.1		0.30	0.060	ug/L		10/30/15 12:47	11/01/15 15:52	1
Manganese	7500	E	2.5	1.2	ug/L		10/30/15 12:47	11/01/15 15:52	1
Molybdenum	1.5		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 15:52	1
Nickel	17		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:52	1
Selenium	0.58	U	2.0	0.58	ug/L		10/30/15 12:47	11/01/15 15:52	1
Silver	0.10	U	1.0	0.10	ug/L		10/30/15 12:47	11/01/15 15:52	1
Thallium	0.15	J	0.20	0.10	ug/L		10/30/15 12:47	11/01/15 15:52	1
Vanadium	3.7		1.0	0.30	ug/L		10/30/15 12:47	11/01/15 15:52	1
Zinc	4700	E	20	2.8	ug/L		10/30/15 12:47	11/01/15 15:52	1

## Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	0.40	U	1.0	0.40	ug/L		10/30/15 12:47	11/01/15 16:04	1
Arsenic, Dissolved	0.37	U	1.0	0.37	ug/L		10/30/15 12:47	11/01/15 16:04	1
Barium, Dissolved	8.1	B	2.0	0.14	ug/L		10/30/15 12:47	11/01/15 16:04	1
Beryllium, Dissolved	0.15	U	0.40	0.15	ug/L		10/30/15 12:47	11/01/15 16:04	1
Cadmium, Dissolved	0.17	J	0.50	0.043	ug/L		10/30/15 12:47	11/01/15 16:04	1
Chromium, Dissolved	1.0	U	2.0	1.0	ug/L		10/30/15 12:47	11/01/15 16:04	1
Cobalt, Dissolved	0.89		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 16:04	1
Copper, Dissolved	3.7		1.0	0.50	ug/L		10/30/15 12:47	11/01/15 16:04	1
Lead, Dissolved	0.067	J	0.30	0.060	ug/L		10/30/15 12:47	11/01/15 16:04	1
Manganese, Dissolved	18		2.5	1.2	ug/L		10/30/15 12:47	11/01/15 16:04	1
Molybdenum, Dissolved	1.1		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 16:04	1
Nickel, Dissolved	5.1		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 16:04	1
Selenium, Dissolved	0.58	U	2.0	0.58	ug/L		10/30/15 12:47	11/01/15 16:04	1
Silver, Dissolved	0.10	U	1.0	0.10	ug/L		10/30/15 12:47	11/01/15 16:04	1
Thallium, Dissolved	0.11	J	0.20	0.10	ug/L		10/30/15 12:47	11/01/15 16:04	1
Vanadium, Dissolved	0.30	U	1.0	0.30	ug/L		10/30/15 12:47	11/01/15 16:04	1
Zinc, Dissolved	30		20	2.8	ug/L		10/30/15 12:47	11/01/15 16:04	1

## Method: 2340B-2011 - Total Hardness (as CaCO<sub>3</sub>) by calculation

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	1400			3.3	mg/L			11/02/15 14:20	1

## Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 16:47	1

## Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 17:54	1

## General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH	11.7	HF		SU				10/31/15 11:35	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	92		5.0	5.0	mg/L			10/31/15 11:35	1

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Lab Sample ID: 680-118430-4**

**Matrix: Water**

Date Collected: 10/29/15 08:55

Date Received: 10/30/15 09:45

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.50	J	1.0	0.40	mg/L			10/30/15 14:19	2
Nitrate as N	0.046	U	0.10	0.046	mg/L			10/30/15 15:18	2
Fluoride	9.8		0.20	0.080	mg/L			10/30/15 14:19	2
Sulfate	1700		50	20	mg/L			10/30/15 14:34	50

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	21000		200	24	ug/L			10/30/15 12:47	1
Calcium	370000		5000	250	ug/L			10/30/15 12:47	10
Iron	84000		50	17	ug/L			10/30/15 12:47	1
Magnesium	22000		5000	330	ug/L			10/30/15 12:47	10
Potassium	2500	* F1	1000	17	ug/L			10/30/15 12:47	1
Sodium	1800		1000	480	ug/L			10/30/15 12:47	1

## Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	21000		200	24	ug/L			10/30/15 12:47	1
Calcium, Dissolved	370000		5000	250	ug/L			10/30/15 12:47	10
Iron, Dissolved	77000		50	17	ug/L			10/30/15 12:47	1
Magnesium, Dissolved	22000		5000	330	ug/L			10/30/15 12:47	10
Potassium, Dissolved	2500	*	1000	17	ug/L			10/30/15 12:47	1
Sodium, Dissolved	1600		1000	480	ug/L			10/30/15 12:47	1

## Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.4		1.0	0.40	ug/L			10/30/15 12:47	1
Arsenic	29		1.0	0.37	ug/L			10/30/15 12:47	1
Barium	9.6	B	2.0	0.14	ug/L			10/30/15 12:47	1
Beryllium	9.0		0.40	0.15	ug/L			10/30/15 12:47	1
Cadmium	56		0.50	0.043	ug/L			10/30/15 12:47	1
Chromium	2.7		2.0	1.0	ug/L			10/30/15 12:47	1
Cobalt	84		0.40	0.12	ug/L			10/30/15 12:47	1
Copper	5100		100	50	ug/L			10/30/15 12:47	100
Lead	30		0.30	0.060	ug/L			10/30/15 12:47	1
Manganese	30000		250	120	ug/L			10/30/15 12:47	100
Molybdenum	3.9		1.0	0.45	ug/L			10/30/15 12:47	1
Nickel	49		1.0	0.40	ug/L			10/30/15 12:47	1
Selenium	1.4	J	2.0	0.58	ug/L			10/30/15 12:47	1
Silver	0.10	U	1.0	0.10	ug/L			10/30/15 12:47	1
Thallium	0.24		0.20	0.10	ug/L			10/30/15 12:47	1
Vanadium	21		1.0	0.30	ug/L			10/30/15 12:47	1
Zinc	21000		2000	280	ug/L			10/30/15 12:47	100

## Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	1.9		1.0	0.40	ug/L			10/30/15 12:47	1
Arsenic, Dissolved	22		1.0	0.37	ug/L			10/30/15 12:47	1
Barium, Dissolved	9.7	B	2.0	0.14	ug/L			10/30/15 12:47	1
Beryllium, Dissolved	9.1		0.40	0.15	ug/L			10/30/15 12:47	1
Cadmium, Dissolved	56		0.50	0.043	ug/L			10/30/15 12:47	1

TestAmerica Savannah

# Client Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Lab Sample ID: 680-118430-4**

**Matrix: Water**

Date Collected: 10/29/15 08:55

Date Received: 10/30/15 09:45

## Method: 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Dissolved	2.1		2.0	1.0	ug/L		10/30/15 12:47	11/01/15 16:08	1
Cobalt, Dissolved	82		0.40	0.12	ug/L		10/30/15 12:47	11/01/15 16:08	1
Copper, Dissolved	4800		100	50	ug/L		10/30/15 12:47	11/02/15 09:20	100
Lead, Dissolved	26		0.30	0.060	ug/L		10/30/15 12:47	11/01/15 16:08	1
Manganese, Dissolved	29000		250	120	ug/L		10/30/15 12:47	11/02/15 09:20	100
Molybdenum, Dissolved	3.0		1.0	0.45	ug/L		10/30/15 12:47	11/01/15 16:08	1
Nickel, Dissolved	47		1.0	0.40	ug/L		10/30/15 12:47	11/01/15 16:08	1
Selenium, Dissolved	1.6 J		2.0	0.58	ug/L		10/30/15 12:47	11/01/15 16:08	1
Silver, Dissolved	0.10 U		1.0	0.10	ug/L		10/30/15 12:47	11/01/15 16:08	1
Thallium, Dissolved	0.24		0.20	0.10	ug/L		10/30/15 12:47	11/01/15 16:08	1
Vanadium, Dissolved	16		1.0	0.30	ug/L		10/30/15 12:47	11/01/15 16:08	1
Zinc, Dissolved	20000		2000	280	ug/L		10/30/15 12:47	11/02/15 09:20	100

## Method: 2340B-2011 - Total Hardness (as CaCO<sub>3</sub>) by calculation

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Hardness	1000			3.3	mg/L			11/02/15 14:20	1

## Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 16:50	1

## Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.080	U	0.20	0.080	ug/L		10/30/15 13:16	10/30/15 17:57	1

## General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.58	HF			SU			10/31/15 11:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	mg/L			10/31/15 11:39	1

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID:** MB 680-408325/2

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.023	U	0.050	0.023	mg/L	-	-	10/30/15 10:16	1

**Lab Sample ID:** LCS 680-408325/3

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Nitrate as N	0.999	1.08		mg/L	-	108	90 - 110

**Lab Sample ID:** LCSD 680-408325/4

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Nitrate as N	0.999	1.08		mg/L	-	109	90 - 110	0

**Lab Sample ID:** 680-118430-1 MS

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** A72\_102915\_0715  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Nitrate as N	0.091		0.999	1.21		mg/L	-	112	80 - 120

**Lab Sample ID:** 680-118430-1 MSD

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** A72\_102915\_0715  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Nitrate as N	0.091		0.999	1.23		mg/L	-	114	80 - 120	2

**Lab Sample ID:** 680-118430-1 DU

**Matrix:** Water

**Analysis Batch:** 408325

**Client Sample ID:** A72\_102915\_0715  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	0.091		0.0904		mg/L	-	-	0.6

**Lab Sample ID:** MB 680-408326/2

**Matrix:** Water

**Analysis Batch:** 408326

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.50	0.20	mg/L	-	-	10/30/15 10:10	1
Fluoride	0.040	U	0.10	0.040	mg/L	-	-	10/30/15 10:10	1
Sulfate	0.40	U	1.0	0.40	mg/L	-	-	10/30/15 10:10	1

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 680-408326/3**

**Matrix: Water**

**Analysis Batch: 408326**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.3		mg/L		103	90 - 110
Fluoride	2.00	2.13		mg/L		107	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

**Lab Sample ID: LCSD 680-408326/4**

**Matrix: Water**

**Analysis Batch: 408326**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.3		mg/L		103	90 - 110	0	30
Fluoride	2.00	2.14		mg/L		107	90 - 110	0	30
Sulfate	10.0	10.7		mg/L		107	90 - 110	0	30

**Lab Sample ID: 680-118430-1 MS**

**Matrix: Water**

**Analysis Batch: 408326**

**Client Sample ID: A72\_102915\_0715**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.2	J	100	106		mg/L		104	80 - 120
Fluoride	0.55	J	20.0	23.0		mg/L		112	80 - 120
Sulfate	210		100	313		mg/L		98	80 - 120

**Lab Sample ID: 680-118430-1 MSD**

**Matrix: Water**

**Analysis Batch: 408326**

**Client Sample ID: A72\_102915\_0715**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2.2	J	100	106		mg/L		104	80 - 120	0	30
Fluoride	0.55	J	20.0	23.1		mg/L		113	80 - 120	0	30
Sulfate	210		100	312		mg/L		98	80 - 120	0	30

**Lab Sample ID: 680-118430-1 DU**

**Matrix: Water**

**Analysis Batch: 408326**

**Client Sample ID: A72\_102915\_0715**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	2.2	J	2.16	J	mg/L		0.5	30
Fluoride	0.55	J	0.546	J	mg/L		2	30
Sulfate	210		210		mg/L		2	30

## Method: 200.7 Rev 4.4 - Metals (ICP)

**Lab Sample ID: MB 680-408299/1-A**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 408299**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	24	U	200	24	ug/L		10/30/15 12:47	11/02/15 11:20	1
Aluminum, Dissolved	24	U	200	24	ug/L		10/30/15 12:47	11/02/15 11:20	1

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

**Lab Sample ID: MB 680-408299/1-A**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 408299**

**MB MB**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	25	U	500	25	ug/L		10/30/15 12:47	11/02/15 11:20	1
Calcium, Dissolved	25	U	500	25	ug/L		10/30/15 12:47	11/02/15 11:20	1
Iron	17	U	50	17	ug/L		10/30/15 12:47	11/02/15 11:20	1
Iron, Dissolved	17	U	50	17	ug/L		10/30/15 12:47	11/02/15 11:20	1
Magnesium	33	U	500	33	ug/L		10/30/15 12:47	11/02/15 11:20	1
Magnesium, Dissolved	33	U	500	33	ug/L		10/30/15 12:47	11/02/15 11:20	1
Potassium	17	U	1000	17	ug/L		10/30/15 12:47	11/02/15 11:20	1
Potassium, Dissolved	17	U	1000	17	ug/L		10/30/15 12:47	11/02/15 11:20	1
Sodium	480	U	1000	480	ug/L		10/30/15 12:47	11/02/15 11:20	1
Sodium, Dissolved	480	U	1000	480	ug/L		10/30/15 12:47	11/02/15 11:20	1

**Lab Sample ID: LCS 680-408299/2-A**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aluminum	2000	2040		ug/L		102	85 - 115
Aluminum, Dissolved	2000	2040		ug/L		102	85 - 115
Calcium	2000	2100		ug/L		105	85 - 115
Calcium, Dissolved	2000	2100		ug/L		105	85 - 115
Iron	2000	2090		ug/L		104	85 - 115
Iron, Dissolved	2000	2090		ug/L		104	85 - 115
Magnesium	2000	2140		ug/L		107	85 - 115
Magnesium, Dissolved	2000	2140		ug/L		107	85 - 115
Potassium	2000	2460 *		ug/L		123	85 - 115
Potassium, Dissolved	2000	2460 *		ug/L		123	85 - 115
Sodium	2000	2210		ug/L		111	85 - 115
Sodium, Dissolved	2000	2210		ug/L		111	85 - 115

**Lab Sample ID: 680-118430-4 MS**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Aluminum	21000		2000	23100	4	ug/L		105	75 - 125
Aluminum, Dissolved	21000		2000	23100	4	ug/L		105	75 - 125
Iron	84000		2000	85500	4	ug/L		81	75 - 125
Iron, Dissolved	84000		2000	85500	4	ug/L		81	75 - 125
Potassium	2500 *	F1	2000	5290	F1	ug/L		141	75 - 125
Potassium, Dissolved	2500 *	F1	2000	5290	F1	ug/L		141	75 - 125
Sodium	1800		2000	4180		ug/L		118	75 - 125
Sodium, Dissolved	1800		2000	4180		ug/L		118	75 - 125

**Lab Sample ID: 680-118430-4 MS**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Calcium	370000		2000	372000	4	ug/L		137	75 - 125

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

**Lab Sample ID: 680-118430-4 MS**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	%Rec.
	Result	Qualifier	Added	Result	Qualifier					
Calcium, Dissolved	370000		2000	372000	4	ug/L		137	75 - 125	
Magnesium	22000		2000	24100	4	ug/L		101	75 - 125	
Magnesium, Dissolved	22000		2000	24100	4	ug/L		101	75 - 125	

**Lab Sample ID: 680-118430-4 MSD**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier						
Aluminum	21000		2000	22700	4	ug/L		85	75 - 125		2
Aluminum, Dissolved	21000		2000	22700	4	ug/L		85	75 - 125		2
Iron	84000		2000	84100	4	ug/L		9	75 - 125		2
Iron, Dissolved	84000		2000	84100	4	ug/L		9	75 - 125		2
Potassium	2500	* F1	2000	5220	F1	ug/L		138	75 - 125		1
Potassium, Dissolved	2500	* F1	2000	5220	F1	ug/L		138	75 - 125		1
Sodium	1800		2000	4160		ug/L		116	75 - 125		1
Sodium, Dissolved	1800		2000	4160		ug/L		116	75 - 125		1

**Lab Sample ID: 680-118430-4 MSD**

**Matrix: Water**

**Analysis Batch: 408579**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408299**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier						
Calcium	370000		2000	367000	4	ug/L		-108	75 - 125		1
Calcium, Dissolved	370000		2000	367000	4	ug/L		-108	75 - 125		1
Magnesium	22000		2000	23900	4	ug/L		88	75 - 125		1
Magnesium, Dissolved	22000		2000	23900	4	ug/L		88	75 - 125		1

## Method: 200.8 - Metals (ICP/MS)

**Lab Sample ID: MB 680-408296/1-A**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	0.40	U	1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:06	1
Antimony, Dissolved	0.40	U	1.0	0.40	ug/L		10/30/15 12:47	11/01/15 15:06	1
Arsenic	0.37	U	1.0	0.37	ug/L		10/30/15 12:47	11/01/15 15:06	1
Arsenic, Dissolved	0.37	U	1.0	0.37	ug/L		10/30/15 12:47	11/01/15 15:06	1
Barium	0.401	J	2.0	0.14	ug/L		10/30/15 12:47	11/01/15 15:06	1
Barium, Dissolved	0.401	J	2.0	0.14	ug/L		10/30/15 12:47	11/01/15 15:06	1
Beryllium	0.15	U	0.40	0.15	ug/L		10/30/15 12:47	11/01/15 15:06	1
Beryllium, Dissolved	0.15	U	0.40	0.15	ug/L		10/30/15 12:47	11/01/15 15:06	1
Cadmium	0.043	U	0.50	0.043	ug/L		10/30/15 12:47	11/01/15 15:06	1
Cadmium, Dissolved	0.043	U	0.50	0.043	ug/L		10/30/15 12:47	11/01/15 15:06	1
Chromium	1.0	U	2.0	1.0	ug/L		10/30/15 12:47	11/01/15 15:06	1
Chromium, Dissolved	1.0	U	2.0	1.0	ug/L		10/30/15 12:47	11/01/15 15:06	1
Cobalt	0.12	U	0.40	0.12	ug/L		10/30/15 12:47	11/01/15 15:06	1
Cobalt, Dissolved	0.12	U	0.40	0.12	ug/L		10/30/15 12:47	11/01/15 15:06	1

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 680-408296/1-A**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	MB		RL	MDL	Unit	D	Prepared		Analyzed	Dil Fac
	Result	Qualifier					Prepared	Analyzed		
Copper	0.50	U	1.0	0.50	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Copper, Dissolved	0.50	U	1.0	0.50	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Lead	0.060	U	0.30	0.060	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Lead, Dissolved	0.060	U	0.30	0.060	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Manganese	1.2	U	2.5	1.2	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Manganese, Dissolved	1.2	U	2.5	1.2	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Molybdenum	0.45	U	1.0	0.45	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Molybdenum, Dissolved	0.45	U	1.0	0.45	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Nickel	0.40	U	1.0	0.40	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Nickel, Dissolved	0.40	U	1.0	0.40	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Selenium	0.58	U	2.0	0.58	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Selenium, Dissolved	0.58	U	2.0	0.58	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Silver	0.10	U	1.0	0.10	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Silver, Dissolved	0.10	U	1.0	0.10	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Thallium	0.10	U	0.20	0.10	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Thallium, Dissolved	0.10	U	0.20	0.10	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Vanadium	0.30	U	1.0	0.30	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Vanadium, Dissolved	0.30	U	1.0	0.30	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Zinc	2.8	U	20	2.8	ug/L	10/30/15 12:47	11/01/15 15:06		1	
Zinc, Dissolved	2.8	U	20	2.8	ug/L	10/30/15 12:47	11/01/15 15:06		1	

**Lab Sample ID: LCS 680-408296/2-A**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Antimony	20.0	20.2		ug/L	101	85 - 115	
Antimony, Dissolved	20.0	20.2		ug/L	101	85 - 115	
Arsenic	40.0	40.7		ug/L	102	85 - 115	
Arsenic, Dissolved	40.0	40.7		ug/L	102	85 - 115	
Barium	40.0	42.0		ug/L	105	85 - 115	
Barium, Dissolved	40.0	42.0		ug/L	105	85 - 115	
Beryllium	20.0	19.1		ug/L	96	85 - 115	
Beryllium, Dissolved	20.0	19.1		ug/L	96	85 - 115	
Cadmium	20.0	20.8		ug/L	104	85 - 115	
Cadmium, Dissolved	20.0	20.8		ug/L	104	85 - 115	
Chromium	40.0	36.7		ug/L	92	85 - 115	
Chromium, Dissolved	40.0	36.7		ug/L	92	85 - 115	
Cobalt	20.0	19.2		ug/L	96	85 - 115	
Cobalt, Dissolved	20.0	19.2		ug/L	96	85 - 115	
Copper	40.0	36.7		ug/L	92	85 - 115	
Copper, Dissolved	40.0	36.7		ug/L	92	85 - 115	
Lead	200	184		ug/L	92	85 - 115	
Lead, Dissolved	200	184		ug/L	92	85 - 115	
Manganese	200	184		ug/L	92	85 - 115	
Manganese, Dissolved	200	184		ug/L	92	85 - 115	
Molybdenum	40.0	37.8		ug/L	95	85 - 115	
Molybdenum, Dissolved	40.0	37.8		ug/L	95	85 - 115	

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 680-408296/2-A**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 408296**

**%Rec.**

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Nickel	40.0	36.4		ug/L	91	85 - 115	
Nickel, Dissolved	40.0	36.4		ug/L	91	85 - 115	
Selenium	40.0	40.4		ug/L	101	85 - 115	
Selenium, Dissolved	40.0	40.4		ug/L	101	85 - 115	
Silver	20.0	18.9		ug/L	94	85 - 115	
Silver, Dissolved	20.0	18.9		ug/L	94	85 - 115	
Thallium	16.0	15.7		ug/L	98	85 - 115	
Thallium, Dissolved	16.0	15.7		ug/L	98	85 - 115	
Vanadium	40.0	36.5		ug/L	91	85 - 115	
Vanadium, Dissolved	40.0	36.5		ug/L	91	85 - 115	
Zinc	40.0	41.9		ug/L	105	85 - 115	
Zinc, Dissolved	40.0	41.9		ug/L	105	85 - 115	

**Lab Sample ID: 680-118430-4 MS**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	2.4		20.0	22.1		ug/L	99	70 - 130	
Antimony, Dissolved	2.4		20.0	22.1		ug/L	99	70 - 130	
Arsenic	29		40.0	74.3		ug/L	113	70 - 130	
Arsenic, Dissolved	29		40.0	74.3		ug/L	113	70 - 130	
Barium	9.6 B		40.0	50.3		ug/L	102	70 - 130	
Barium, Dissolved	9.6 B		40.0	50.3		ug/L	102	70 - 130	
Beryllium	9.0		20.0	30.3		ug/L	106	70 - 130	
Beryllium, Dissolved	9.0		20.0	30.3		ug/L	106	70 - 130	
Cadmium	56		20.0	73.8		ug/L	91	70 - 130	
Cadmium, Dissolved	56		20.0	73.8		ug/L	91	70 - 130	
Chromium	2.7		40.0	42.5		ug/L	99	70 - 130	
Chromium, Dissolved	2.7		40.0	42.5		ug/L	99	70 - 130	
Cobalt	84		20.0	105 4		ug/L	107	70 - 130	
Cobalt, Dissolved	84		20.0	105 4		ug/L	107	70 - 130	
Lead	30		200	209		ug/L	89	70 - 130	
Lead, Dissolved	30		200	209		ug/L	89	70 - 130	
Molybdenum	3.9		40.0	45.9		ug/L	105	70 - 130	
Molybdenum, Dissolved	3.9		40.0	45.9		ug/L	105	70 - 130	
Nickel	49		40.0	87.1		ug/L	96	70 - 130	
Nickel, Dissolved	49		40.0	87.1		ug/L	96	70 - 130	
Selenium	1.4 J		40.0	48.0		ug/L	116	70 - 130	
Selenium, Dissolved	1.4 J		40.0	48.0		ug/L	116	70 - 130	
Silver	0.10 U		20.0	18.6		ug/L	93	70 - 130	
Silver, Dissolved	0.10 U		20.0	18.6		ug/L	93	70 - 130	
Thallium	0.24		16.0	16.3		ug/L	101	70 - 130	
Thallium, Dissolved	0.24		16.0	16.3		ug/L	101	70 - 130	
Vanadium	21		40.0	63.7		ug/L	106	70 - 130	
Vanadium, Dissolved	21		40.0	63.7		ug/L	106	70 - 130	

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 680-118430-4 MS**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Copper	5100		40.0	4930	4	ug/L	-372	70 - 130	
Copper, Dissolved	5100		40.0	4930	4	ug/L	-372	70 - 130	
Manganese	30000		200	29600	4	ug/L	-390	70 - 130	
Manganese, Dissolved	30000		200	29600	4	ug/L	-390	70 - 130	
Zinc	21000		40.0	20300	4	ug/L	-1637	70 - 130	
Zinc, Dissolved	21000		40.0	20300	4	ug/L	-1637	70 - 130	

**Lab Sample ID: 680-118430-4 MSD**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier					
Antimony	2.4		20.0	22.2		ug/L	99	70 - 130	1	20
Antimony, Dissolved	2.4		20.0	22.2		ug/L	99	70 - 130	1	20
Arsenic	29		40.0	73.3		ug/L	111	70 - 130	1	20
Arsenic, Dissolved	29		40.0	73.3		ug/L	111	70 - 130	1	20
Barium	9.6	B	40.0	50.6		ug/L	103	70 - 130	1	20
Barium, Dissolved	9.6	B	40.0	50.6		ug/L	103	70 - 130	1	20
Beryllium	9.0		20.0	30.4		ug/L	107	70 - 130	1	20
Beryllium, Dissolved	9.0		20.0	30.4		ug/L	107	70 - 130	1	20
Cadmium	56		20.0	74.9		ug/L	97	70 - 130	2	20
Cadmium, Dissolved	56		20.0	74.9		ug/L	97	70 - 130	2	20
Chromium	2.7		40.0	42.1		ug/L	98	70 - 130	1	20
Chromium, Dissolved	2.7		40.0	42.1		ug/L	98	70 - 130	1	20
Cobalt	84		20.0	103	4	ug/L	96	70 - 130	2	20
Cobalt, Dissolved	84		20.0	103	4	ug/L	96	70 - 130	2	20
Lead	30		200	207		ug/L	88	70 - 130	1	20
Lead, Dissolved	30		200	207		ug/L	88	70 - 130	1	20
Molybdenum	3.9		40.0	46.3		ug/L	106	70 - 130	1	20
Molybdenum, Dissolved	3.9		40.0	46.3		ug/L	106	70 - 130	1	20
Nickel	49		40.0	84.8		ug/L	90	70 - 130	3	20
Nickel, Dissolved	49		40.0	84.8		ug/L	90	70 - 130	3	20
Selenium	1.4	J	40.0	48.5		ug/L	118	70 - 130	1	20
Selenium, Dissolved	1.4	J	40.0	48.5		ug/L	118	70 - 130	1	20
Silver	0.10	U	20.0	18.3		ug/L	92	70 - 130	1	20
Silver, Dissolved	0.10	U	20.0	18.3		ug/L	92	70 - 130	1	20
Thallium	0.24		16.0	16.3		ug/L	100	70 - 130	0	20
Thallium, Dissolved	0.24		16.0	16.3		ug/L	100	70 - 130	0	20
Vanadium	21		40.0	62.9		ug/L	104	70 - 130	1	20
Vanadium, Dissolved	21		40.0	62.9		ug/L	104	70 - 130	1	20

**Lab Sample ID: 680-118430-4 MSD**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier					
Copper	5100		40.0	4830	4	ug/L	-607	70 - 130	2	20
Copper, Dissolved	5100		40.0	4830	4	ug/L	-607	70 - 130	2	20

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 680-118430-4 MSD**

**Matrix: Water**

**Analysis Batch: 408561**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

**Prep Batch: 408296**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Manganese	30000		200	28600	4	ug/L	-896	70 - 130	3	20	
Manganese, Dissolved	30000		200	28600	4	ug/L	-896	70 - 130	3	20	
Zinc	21000		40.0	19700	4	ug/L	-3357	70 - 130	3	20	
Zinc, Dissolved	21000		40.0	19700	4	ug/L	-3357	70 - 130	3	20	

## Method: 2340B-2011 - Total Hardness (as CaCO<sub>3</sub>) by calculation

**Lab Sample ID: MB 680-408580/1**

**Matrix: Water**

**Analysis Batch: 408580**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Hardness	3.3	U	3.3	3.3	mg/L	-	-	11/02/15 14:20	1

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 680-408302/13-A**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 408302**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.080	U	0.20	0.080	ug/L	-	10/30/15 13:16	10/30/15 16:25	1
Mercury, Dissolved	0.080	U	0.20	0.080	ug/L	-	10/30/15 13:16	10/30/15 16:25	1

**Lab Sample ID: LCS 680-408302/15-A**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 408302**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Mercury	2.50	2.55		ug/L	-	102	85 - 115
Mercury, Dissolved	2.50	2.55		ug/L	-	102	85 - 115

**Lab Sample ID: 680-118430-1 MS**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: A72\_102915\_0715**

**Prep Type: Total/NA**

**Prep Batch: 408302**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	0.080	U	1.00	1.08		ug/L	-	108	70 - 130

**Lab Sample ID: 680-118430-1 MSD**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: A72\_102915\_0715**

**Prep Type: Total/NA**

**Prep Batch: 408302**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Mercury	0.080	U	1.00	1.04		ug/L	-	104	70 - 130	3	20

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 245.1 - Mercury (CVAA) (Continued)

**Lab Sample ID: 680-118430-1 MS**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: A72\_102915\_0715**

**Prep Type: Dissolved**

**Prep Batch: 408302**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury, Dissolved	0.080	U	1.00	1.05		ug/L		105	70 - 130

**Lab Sample ID: 680-118430-1 MSD**

**Matrix: Water**

**Analysis Batch: 408490**

**Client Sample ID: A72\_102915\_0715**

**Prep Type: Dissolved**

**Prep Batch: 408302**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury, Dissolved	0.080	U	1.00	1.02		ug/L		102	70 - 130	3 20

## Method: 2320B-2011 - Alkalinity, Total

**Lab Sample ID: MB 680-408406/4**

**Matrix: Water**

**Analysis Batch: 408406**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U		5.0	mg/L			10/31/15 09:35	1

**Lab Sample ID: LCS 680-408406/9**

**Matrix: Water**

**Analysis Batch: 408406**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Alkalinity		248	264	mg/L		106	80 - 120

**Lab Sample ID: LCSD 680-408406/27**

**Matrix: Water**

**Analysis Batch: 408406**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Alkalinity		248	268	mg/L		108	80 - 120	1 30

**Lab Sample ID: 680-118430-4 DU**

**Matrix: Water**

**Analysis Batch: 408406**

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity	5.0	U		5.0	mg/L		NC	30

## Method: 4500 H+ B-2011 - pH

**Lab Sample ID: LCS 680-408407/6**

**Matrix: Water**

**Analysis Batch: 408407**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
pH		7.00	7.180	SU		103	63 - 158

TestAmerica Savannah

# QC Sample Results

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Method: 4500 H+ B-2011 - pH (Continued)

Lab Sample ID: 680-118430-4 DU

Matrix: Water

Analysis Batch: 408407

Client Sample ID: GKM\_GSTI\_102915\_0855D

Prep Type: Total/NA

Analyte	Sample	Sample	DU Result	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier		Qualifier					
pH	3.58	HF	3.880		SU		8		40

# QC Association Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## HPLC/IC

### Analysis Batch: 408325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Total/NA	Water	300.0	1
680-118430-1 DU	A72_102915_0715	Total/NA	Water	300.0	2
680-118430-1 MS	A72_102915_0715	Total/NA	Water	300.0	3
680-118430-1 MSD	A72_102915_0715	Total/NA	Water	300.0	4
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	300.0	5
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	300.0	6
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	300.0	7
LCS 680-408325/3	Lab Control Sample	Total/NA	Water	300.0	8
LCSD 680-408325/4	Lab Control Sample Dup	Total/NA	Water	300.0	9
MB 680-408325/2	Method Blank	Total/NA	Water	300.0	10

### Analysis Batch: 408326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Total/NA	Water	300.0	11
680-118430-1	A72_102915_0715	Total/NA	Water	300.0	12
680-118430-1 DU	A72_102915_0715	Total/NA	Water	300.0	
680-118430-1 MS	A72_102915_0715	Total/NA	Water	300.0	
680-118430-1 MSD	A72_102915_0715	Total/NA	Water	300.0	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	300.0	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	300.0	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	300.0	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	300.0	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	300.0	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	300.0	
LCS 680-408326/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-408326/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-408326/2	Method Blank	Total/NA	Water	300.0	

## Metals

### Prep Batch: 408296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	200	
680-118430-1	A72_102915_0715	Total/NA	Water	200	
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200	
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	200	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	200	
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200	
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200	
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200	
LCS 680-408296/2-A	Lab Control Sample	Total/NA	Water	200	
MB 680-408296/1-A	Method Blank	Total/NA	Water	200	

### Prep Batch: 408299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	200	
680-118430-1	A72_102915_0715	Total/NA	Water	200	
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200	

TestAmerica Savannah

# QC Association Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Metals (Continued)

### Prep Batch: 408299 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200	5
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	200	6
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	200	7
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200	8
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200	9
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200	10
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200	11
LCS 680-408299/2-A	Lab Control Sample	Total/NA	Water	200	12
MB 680-408299/1-A	Method Blank	Total/NA	Water	200	

### Prep Batch: 408302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	245.1	10
680-118430-1	A72_102915_0715	Total/NA	Water	245.1	11
680-118430-1 MS	A72_102915_0715	Dissolved	Water	245.1	12
680-118430-1 MS	A72_102915_0715	Total/NA	Water	245.1	
680-118430-1 MSD	A72_102915_0715	Dissolved	Water	245.1	
680-118430-1 MSD	A72_102915_0715	Total/NA	Water	245.1	
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	245.1	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	245.1	
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	245.1	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	245.1	
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	245.1	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	245.1	
LCS 680-408302/15-A	Lab Control Sample	Total/NA	Water	245.1	
MB 680-408302/13-A	Method Blank	Total/NA	Water	245.1	

### Analysis Batch: 408490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	245.1	408302
680-118430-1	A72_102915_0715	Total/NA	Water	245.1	408302
680-118430-1 MS	A72_102915_0715	Dissolved	Water	245.1	408302
680-118430-1 MS	A72_102915_0715	Total/NA	Water	245.1	408302
680-118430-1 MSD	A72_102915_0715	Dissolved	Water	245.1	408302
680-118430-1 MSD	A72_102915_0715	Total/NA	Water	245.1	408302
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	245.1	408302
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	245.1	408302
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	245.1	408302
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	245.1	408302
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	245.1	408302
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	245.1	408302
LCS 680-408302/15-A	Lab Control Sample	Total/NA	Water	245.1	408302
MB 680-408302/13-A	Method Blank	Total/NA	Water	245.1	408302

### Analysis Batch: 408561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	200.8	408296
680-118430-1	A72_102915_0715	Total/NA	Water	200.8	408296
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200.8	408296
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200.8	408296
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200.8	408296

TestAmerica Savannah

# QC Association Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## Metals (Continued)

### Analysis Batch: 408561 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200.8	408296
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	200.8	408296
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	200.8	408296
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200.8	408296
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200.8	408296
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200.8	408296
LCS 680-408296/2-A	Lab Control Sample	Total/NA	Water	200.8	408296
MB 680-408296/1-A	Method Blank	Total/NA	Water	200.8	408296

### Analysis Batch: 408579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-1	A72_102915_0715	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-2	GKM_GSTI_102915_0855	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-3	GKM_GSTO_102915_1000	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-4	GKM_GSTI_102915_0855D	Dissolved	Water	200.7 Rev 4.4	408299
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4 MS	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
680-118430-4 MSD	GKM_GSTI_102915_0855D	Total/NA	Water	200.7 Rev 4.4	408299
LCS 680-408299/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	408299
MB 680-408299/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	408299

### Analysis Batch: 408580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Total/NA	Water	2340B-2011	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	2340B-2011	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	2340B-2011	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	2340B-2011	
MB 680-408580/1	Method Blank	Total/NA	Water	2340B-2011	

## General Chemistry

### Analysis Batch: 408406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Total/NA	Water	2320B-2011	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	2320B-2011	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	2320B-2011	

TestAmerica Savannah

# QC Association Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

## General Chemistry (Continued)

### Analysis Batch: 408406 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	2320B-2011	
680-118430-4 DU	GKM_GSTI_102915_0855D	Total/NA	Water	2320B-2011	
LCS 680-408406/9	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-408406/27	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
MB 680-408406/4	Method Blank	Total/NA	Water	2320B-2011	

### Analysis Batch: 408407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-118430-1	A72_102915_0715	Total/NA	Water	4500 H+ B-2011	
680-118430-2	GKM_GSTI_102915_0855	Total/NA	Water	4500 H+ B-2011	
680-118430-3	GKM_GSTO_102915_1000	Total/NA	Water	4500 H+ B-2011	
680-118430-4	GKM_GSTI_102915_0855D	Total/NA	Water	4500 H+ B-2011	
680-118430-4 DU	GKM_GSTI_102915_0855D	Total/NA	Water	4500 H+ B-2011	
LCS 680-408407/6	Lab Control Sample	Total/NA	Water	4500 H+ B-2011	

# Lab Chronicle

Client: Weston Solutions, Inc.  
Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: A72\_102915\_0715**

**Lab Sample ID: 680-118430-1**

**Matrix: Water**

**Date Collected: 10/29/15 07:15**

**Date Received: 10/30/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0 Instrument ID: CICG		1	5 mL	5 mL	408325	10/30/15 13:46	AJO	TAL SAV
Total/NA	Analysis	300.0 Instrument ID: CICL		1	5 mL	5 mL	408326	10/30/15 13:36	AJO	TAL SAV
Total/NA	Analysis	300.0 Instrument ID: CICL		10	5 mL	5 mL	408326	10/30/15 15:17	AJO	TAL SAV
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.7 Rev 4.4 Instrument ID: ICPE		1	50 mL	50 mL	408579	11/02/15 12:32	BCB	TAL SAV
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4 Instrument ID: ICPE		1	50 mL	50 mL	408579	11/02/15 12:00	BCB	TAL SAV
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8 Instrument ID: ICPMSC		1	50 mL	50 mL	408561	11/01/15 15:56	BWR	TAL SAV
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8 Instrument ID: ICPMSC		1	50 mL	50 mL	408561	11/01/15 15:37	BWR	TAL SAV
Total/NA	Analysis	2340B-2011 Instrument ID: ICPE		1			408580	11/02/15 14:20	BCB	TAL SAV
Dissolved	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Dissolved	Analysis	245.1 Instrument ID: LEEMAN2		1	50 mL	50 mL	408490	10/30/15 17:42	CRW	TAL SAV
Total/NA	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Total/NA	Analysis	245.1 Instrument ID: LEEMAN2		1	50 mL	50 mL	408490	10/30/15 16:34	CRW	TAL SAV
Total/NA	Analysis	2320B-2011 Instrument ID: MANTECH		1			408406	10/31/15 11:23	OLB	TAL SAV
Total/NA	Analysis	4500 H+ B-2011 Instrument ID: MANTECH		1			408407	10/31/15 11:23	OLB	TAL SAV

**Client Sample ID: GKM\_GSTI\_102915\_0855**

**Lab Sample ID: 680-118430-2**

**Matrix: Water**

**Date Collected: 10/29/15 08:55**

**Date Received: 10/30/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0 Instrument ID: CICG		2	5 mL	5 mL	408325	10/30/15 14:47	AJO	TAL SAV
Total/NA	Analysis	300.0 Instrument ID: CICL		2	5 mL	5 mL	408326	10/30/15 13:50	AJO	TAL SAV
Total/NA	Analysis	300.0 Instrument ID: CICL		50	5 mL	5 mL	408326	10/30/15 16:15	AJO	TAL SAV
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV

TestAmerica Savannah

# Lab Chronicle

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855**

**Date Collected: 10/29/15 08:55**

**Date Received: 10/30/15 09:45**

**Lab Sample ID: 680-118430-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 12:35	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.7 Rev 4.4		10	50 mL	50 mL	408579	11/02/15 12:39	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 12:20	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		10	50 mL	50 mL	408579	11/02/15 12:24	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 16:00	BWR	TAL SAV
		Instrument ID: ICPMSC								
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8		100	50 mL	50 mL	408561	11/02/15 09:16	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 15:41	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8		100	50 mL	50 mL	408561	11/02/15 09:12	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Analysis	2340B-2011		1			408580	11/02/15 14:20	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Dissolved	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 17:51	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Total/NA	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 16:44	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Analysis	2320B-2011		1			408406	10/31/15 11:27	OLB	TAL SAV
		Instrument ID: MANTECH								
Total/NA	Analysis	4500 H+ B-2011		1			408407	10/31/15 11:27	OLB	TAL SAV
		Instrument ID: MANTECH								

**Client Sample ID: GKM\_GSTO\_102915\_1000**

**Date Collected: 10/29/15 10:00**

**Date Received: 10/30/15 09:45**

**Lab Sample ID: 680-118430-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	5 mL	5 mL	408325	10/30/15 15:03	AJO	TAL SAV
		Instrument ID: CICG								

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# Lab Chronicle

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTO\_102915\_1000**

**Date Collected: 10/29/15 10:00**

**Date Received: 10/30/15 09:45**

**Lab Sample ID: 680-118430-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	5 mL	5 mL	408326	10/30/15 14:05	AJO	TAL SAV
		Instrument ID: CICL								
Total/NA	Analysis	300.0		50	5 mL	5 mL	408326	10/30/15 16:30	AJO	TAL SAV
		Instrument ID: CICL								
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 12:43	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 12:28	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 16:04	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 15:52	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Analysis	2340B-2011			1		408580	11/02/15 14:20	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Dissolved	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 17:54	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Total/NA	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 16:47	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Analysis	2320B-2011			1		408406	10/31/15 11:35	OLB	TAL SAV
		Instrument ID: MANTECH								
Total/NA	Analysis	4500 H+ B-2011			1		408407	10/31/15 11:35	OLB	TAL SAV
		Instrument ID: MANTECH								

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Date Collected: 10/29/15 08:55**

**Date Received: 10/30/15 09:45**

**Lab Sample ID: 680-118430-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	5 mL	5 mL	408325	10/30/15 15:18	AJO	TAL SAV
		Instrument ID: CICG								
Total/NA	Analysis	300.0		2	5 mL	5 mL	408326	10/30/15 14:19	AJO	TAL SAV
		Instrument ID: CICL								
Total/NA	Analysis	300.0		50	5 mL	5 mL	408326	10/30/15 14:34	AJO	TAL SAV
		Instrument ID: CICL								
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 12:47	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV

TestAmerica Savannah

# Lab Chronicle

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

**Client Sample ID: GKM\_GSTI\_102915\_0855D**

**Lab Sample ID: 680-118430-4**

**Matrix: Water**

**Date Collected: 10/29/15 08:55**

**Date Received: 10/30/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	200.7 Rev 4.4		10	50 mL	50 mL	408579	11/02/15 12:58	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	408579	11/02/15 11:33	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	408299	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		10	50 mL	50 mL	408579	11/02/15 11:47	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 16:08	BWR	TAL SAV
		Instrument ID: ICPMSC								
Dissolved	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Dissolved	Analysis	200.8		100	50 mL	50 mL	408561	11/02/15 09:20	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8		1	50 mL	50 mL	408561	11/01/15 15:17	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Prep	200			50 mL	50 mL	408296	10/30/15 12:47	KMN	TAL SAV
Total/NA	Analysis	200.8		100	50 mL	50 mL	408561	11/02/15 08:54	BWR	TAL SAV
		Instrument ID: ICPMSC								
Total/NA	Analysis	2340B-2011		1			408580	11/02/15 14:20	BCB	TAL SAV
		Instrument ID: ICPE								
Dissolved	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Dissolved	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 17:57	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Prep	245.1			50 mL	50 mL	408302	10/30/15 13:16	JKL	TAL SAV
Total/NA	Analysis	245.1		1	50 mL	50 mL	408490	10/30/15 16:50	CRW	TAL SAV
		Instrument ID: LEEMAN2								
Total/NA	Analysis	2320B-2011		1			408406	10/31/15 11:39	OLB	TAL SAV
		Instrument ID: MANTECH								
Total/NA	Analysis	4500 H+ B-2011		1			408407	10/31/15 11:39	OLB	TAL SAV
		Instrument ID: MANTECH								

**Laboratory References:**

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica Savannah

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

 TestAmerica Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.testamericainc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternative Laboratory Name/Location

Phone,  
Fax:

Serial Number 92997

PROJECT REFERENCE <b>Gold King Mine</b>	PROJECT NO. <b>CD</b>	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS		PAGE <b>1</b> OF <b>1</b>
TAL (LAB) PROJECT MANAGER	PO. NUMBER	CONTRACT NO.				STANDARD REPORT <input type="checkbox"/>
CLIENT SITE PM <b>Moira Phylde</b>	CLIENT PHONE <b>303-729-6100</b>	CLIENT FAX <b>X 6101</b>				DATE DUE <input type="checkbox"/>
CLIENT NAME <b>Neston Solutions</b>	CLIENT E-MAIL					EXPEDITED REPORT <input type="checkbox"/>
CLIENT ADDRESS <b>1435 Garrison St Ste 100, Lakewood CO 80215</b>						DELIVERY (SURCHARGE) <input type="checkbox"/>
COMPANY CONTRACTING THIS WORK (if applicable)						DATE DUE <input type="checkbox"/>
SAMPLE	DATE	TIME	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS SUBMITTED
			<b>10/29/2015 0715 A72-102915-0715</b>			<b>6</b>
			<b>10/29/15 0855 GKM GST1 102915-0855</b>			<b>6</b>
			<b>10/29/15 1000 GKM GST1 102915-1000</b>			<b>6</b>
			<b>10/29/15 0855 GKM GST1 102915-0855</b>			<b>6</b>
RELINQUISHED BY: (SIGNATURE) <b>Matthew White</b>	DATE <b>10/29/15</b>	TIME <b>1200</b>	RELINQUISHED BY: (SIGNATURE) RECEIVED BY: (SIGNATURE)			RELINQUISHED BY: (SIGNATURE)
RECEIVED BY: (SIGNATURE) <b>Ken Galloway</b>	DATE <b>10/30/15 D941</b>	TIME <b>1200</b>	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			DATE <b>10/30/15 D941</b> TIME <b>1200</b>
LABORATORY USE ONLY						LABORATORY REMARKS
						SAVANNAH LOG NO. <b>680-118430</b>



680-118430 Chain of Custody

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12

## Login Sample Receipt Checklist

Client: Weston Solutions, Inc.

Job Number: 680-118430-1

**Login Number:** 118430

**List Source:** TestAmerica Savannah

**List Number:** 1

**Creator:** Daughtry, Beth A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

## Certification Summary

Client: Weston Solutions, Inc.

Project/Site: Gold King Mine - Region 8

TestAmerica Job ID: 680-118430-1

### Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Colorado	State Program	8	N/A	12-31-15

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